Arctic Energy: Pathway to Conflict or Cooperation in the High North?

TUESDAY, 31 MAY 2011 00:00 NONG HONG

The melting of the Arctic ice cap in combination with developments elsewhere concerning future energy security are creating scenarios that range from low level friction to potential conflict between the Arctic littoral states. Much attention has been devoted to maritime boundary disputes involving the Arctic states: Canada, Denmark, Norway, Russia, and the US. In addition to this, the emerging interest of non-Arctic states in shipping, polar research and non-living resource exploitation also adds uncertain elements to the Arctic geopolitical development. Many Arctic states' populations are skeptical about non-Arctic states' intentions in the Arctic, thus raising such questions as, "Is China going to take away our oil and gas from the Arctic to meet its energy needs?", "Why are Japan and South Korea interested in observatory status in the Arctic Council?" Associated with these concerns is the essential question, "Is the energy factor a curse to Arctic cooperation or an opportunity to a peaceful settlement of Arctic maritime disputes?"

Arctic geopolitics

During the Cold War, the Arctic was a security flashpoint with US and Soviet nuclear submarines patrolling under the North Pole and bombers airborne over the region. Today, the Arctic is disassociated from great power politics. New concerns, challenges and opportunities, however, are arising as the Arctic is perceived to be increasingly more accessible.

Countries with military/security interests and naval capacity in the Arctic are Russia, Canada, Norway, Denmark, and the US. Russia has been the headline grabber with the Chilingarov expedition planting a Russian flag on the sea bed under the North Pole and the resumption of bomber overflights in August 2007. Russian military interests center on the Kola Peninsula, home to the Russian nuclear submarine fleet, and on rebuilding the Northern fleet. The US also released its revised US Arctic Regional Policy in January 2009, which reiterated the importance of the Arctic for US national security and defense. Denmark and Norway, which control Greenland and the Svalbard Islands, respectively, are also anxious to establish their claims. For Greenland, which has just approved a new self government relationship with Denmark, the focus is on developing a cooperative infrastructure in the Arctic, i.e., through the Arctic Council and the International Maritime Organization (IMO). Greenland's desire to have direct participation in the deliberations of Arctic states is complicated by Danish policies, which are focused on Europe and can be at odds with the interests of Greenlanders. Canada is also defending its political interests, for example, by making vessel notifications in the Northwest Passage mandatory and making clear it will not cede anything in the North. Canadian Prime Minister Stephen Harper, in July 2007, announced funding for new Arctic naval patrol vessels, a new deep-water port, and a cold-weather training center along the Northwest Passage.

There are also international governmental organizations and major powers from outside the region which take an interest in the North. For example, the new Northern Dimension is interpreted to mean a common policy of the European Union (EU), the Russian Federation, Iceland and Norway in Northern Europe. In addition, northern issues are finally being given a higher priority on the EU's agenda, and matters relating to the north have been an important concern of the United Nations (UN) for years. For example, the UN has special duties in the region through the UN International Law of the Sea.

Major powers from outside the region, such as the UK, France, Germany, China, Japan and South Korea are taking a growing interest in many aspects of the North, such as in scientific research. Finally, there is a growing worldwide, even global, economic and political interest toward the northernmost regions of the globe, particularly due to estimated fossil fuels in the shelves of the northern seas and visions of new Trans-arctic sea routes. Consequently, trans-national corporations (TNCs) have strong commercial interests to become present to utilize energy resources.

Arctic energy resources in perspective

The melting ice coverage has led some analysts to believe that previously inaccessible oil and gas deposits may now be accessible permanently or periodically. Successful development of these reserves would help to alleviate the pressure on the global oil and gas markets and potentially enhance energy security as a result.

While there are deposits of uranium and coal scattered throughout the area north of the Arctic Circle, the main energy resources of interest for commercial operators are oil and gas. The precise quantities of these resources remain unknown. However, a study conducted in 2008 by the United States Geological Survey (USGS) suggests the Arctic may contain approximately 13% of the global mean estimate of undiscovered oil, which is approximately 618 billion barrels of oil (BBO). While the Eurasian side of the Arctic is more natural-gas-prone, the North American side is more oil-prone. The North American side of the Arctic is estimated to have about 65% of the undiscovered Arctic oil, but only 26% of the undiscovered Arctic natural gas.

The Arctic Alaska region, the Amerasia Basin, and the East Greenland Rift are expected to hold about 48.6 billion barrels of undiscovered oil, which is about 54% of the total undiscovered Arctic oil. Approximately 2.5 billion barrels of oil have already been discovered in large fields in both the Amerasia Basin and the Northwest Canadian Interior Basins that are not yet being produced.

The estimated amount of undiscovered gas is more significant — approximately three-times as much as the estimated oil on an energy-equivalent basis. The median estimated amount represents some 30% of global estimated undiscovered gas. Of course, the existence of these resources does not mean that they will all be exploited. Ultimately, this will most likely be decided by the price of the resource weighed against the extraction, processing, and transportation costs of getting it to market.

Current estimates of hydrocarbon resources in the Arctic vary between 3% and 25% of the world total. Most are likely within established Russian territory, but the extent of deposits in disputed or international spaces is unclear, and the viability of extraction depends on a host of shifting economic and technological variables.

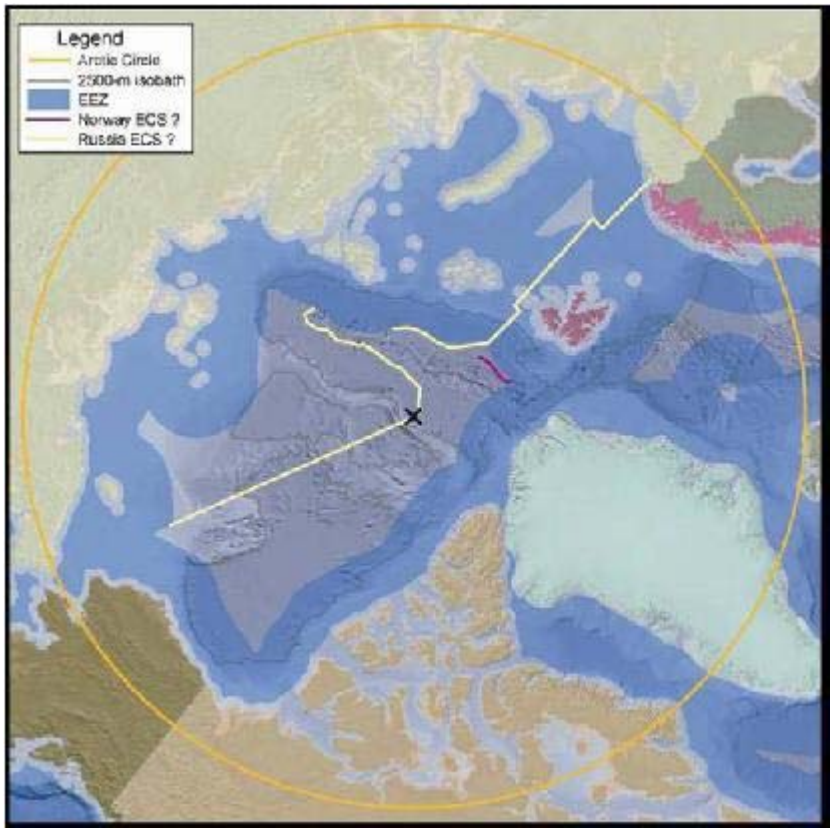
Much attention has been devoted to maritime boundary disputes involving the Arctic states, Canada, Denmark, Norway, Russia, and the US. Some analysts believe that the Arctic might witness conflicts between the littoral states caused by the quest for energy resources.

The melting of the Arctic ice cap in combination with developments elsewhere concerning future energy security are creating scenarios that range from low level friction to potential conflict between the eight nations surrounding the Arctic region, which leads to the question under the legal framework: who owns the energy resources in the Arctic.

Legal aspects: who owns the Arctic's energy resources?
With energy resource playing a significant role in the Arctic's geopolitics, it is important to clarify the ownership of these rich resources. To do that, an unfolding of the disputes among the Arctic states will help clear off the uncertainty.

A framework to resolve boundary disputes in the Arctic exists in the form of the United Nations Convention on the Law of the Sea (UNCLOS). UNCLOS contains provisions regarding the delineation of the outer limits of continental shelves and maritime boundaries. It obliges states to submit their boundary claims to the UN Commission on the Limits of the Continental Shelf (CLCS) within ten years of ratifying UNCLOS. Russia, US, Canada, and Norway have all claimed a 12 nautical mile (nm) territorial sea and a 200 nm Exclusive Economic Zone (EEZ) in the Arctic Ocean. Like the EEZ, the continental shelf automatically extends out to 200 nm, save for the need for a boundary with a neighboring State. The international law on how to define a continental shelf beyond 200nm is found in Article 76 of UNCLOS. Within the extended continental shelf, a State has sovereign rights on and under the seabed, including hydrocarbons (e.g., oil, gas, and gas hydrates), minerals, etc.

Map 1: Russia in the High North

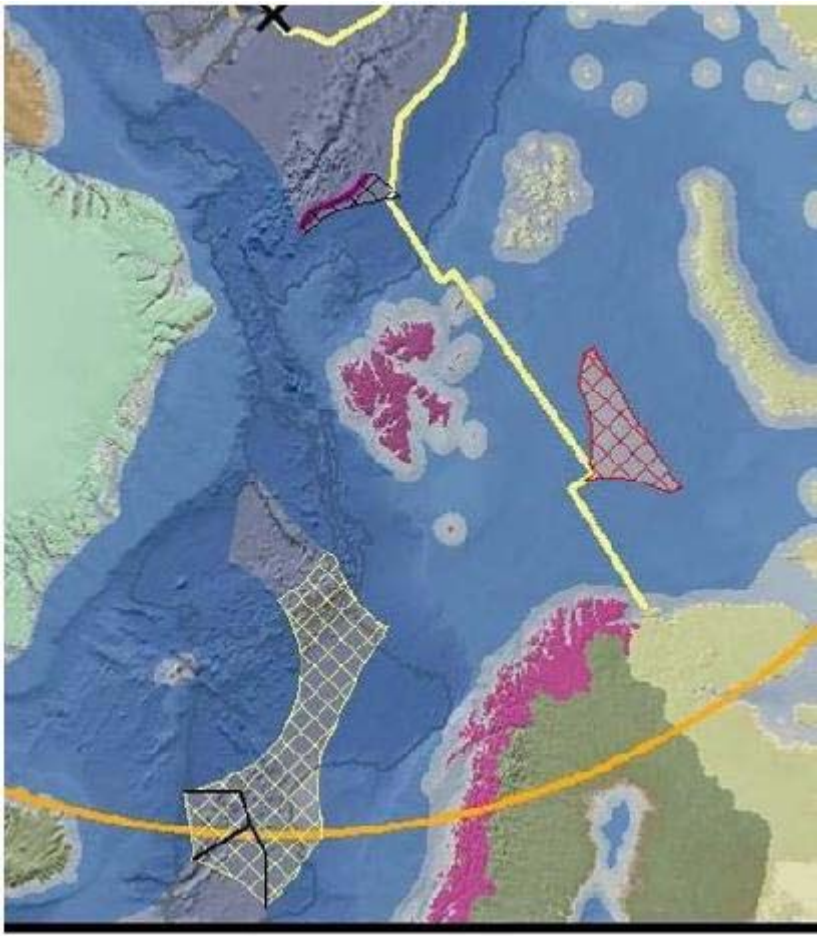


Source: US Department of State

Each of the five Arctic States has an Extended Continental Shelf (ECS) in the Arctic Ocean. Russia was the first to make a submission to the Commission in December 2001. The Commission issued recommendations at its June 2002 meeting that

included a recommendation that Russia make a revised submission that includes additional data for the central Arctic Ocean (see Map 1 above). Russia is collecting and analyzing these data now. Norway has proceeded the farthest of any Arctic State to define its ECS. It made a submission in 2006 that covers three areas – the Banana Hole, the Loop Hole, and a small area north of Svalbard. The CLCS issued recommendations in March of 2009. Norway has publicly accepted those recommendations (see Map 2 below).

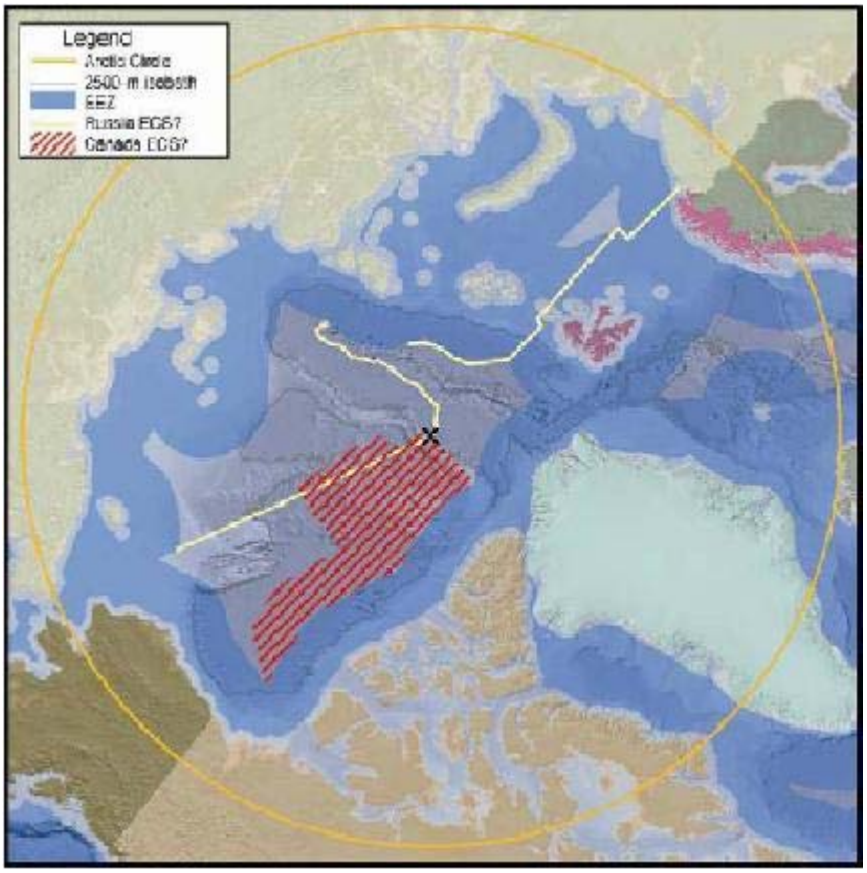
Map 2: Norwegian Areas of Interest in the High North



Source: US State Department

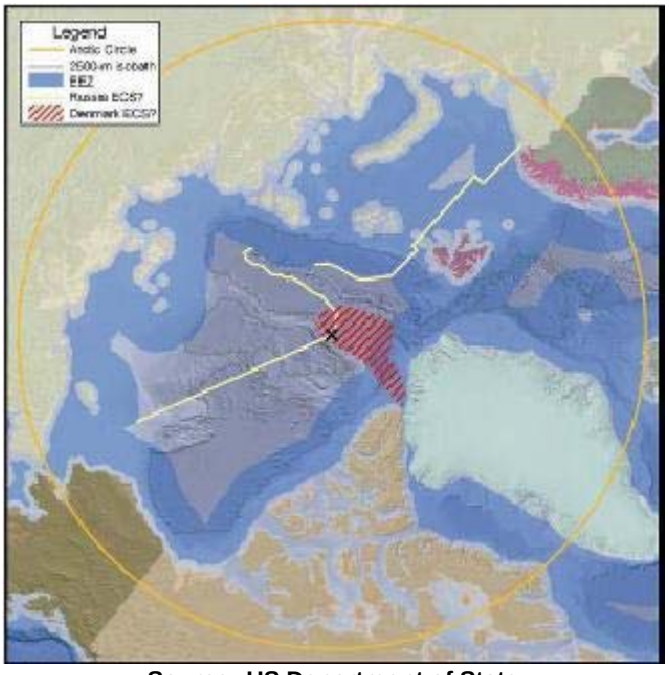
Canada has ECS in the central and western portions of the Arctic Ocean as well as off its East Coast. Canada has two separate cooperative data collection efforts, one with Denmark (since 2005) on the Lomonosov Ridge and another with the US (since 2008) on the Canada Basin and the Chukchi Borderland (see Map 3 below). Canada's submission is due in July 2013. Denmark has ECS in five areas: two areas off the Faroe Islands and three areas off Greenland (see Map 4). Denmark's submission is due in November 2014. The US has been gathering and analyzing data to determine the outer limits of its extended continental shelf since 2002, but has been collecting data in the Arctic Ocean since 2003 (see Map 5).

Map 3: Canadian ECS



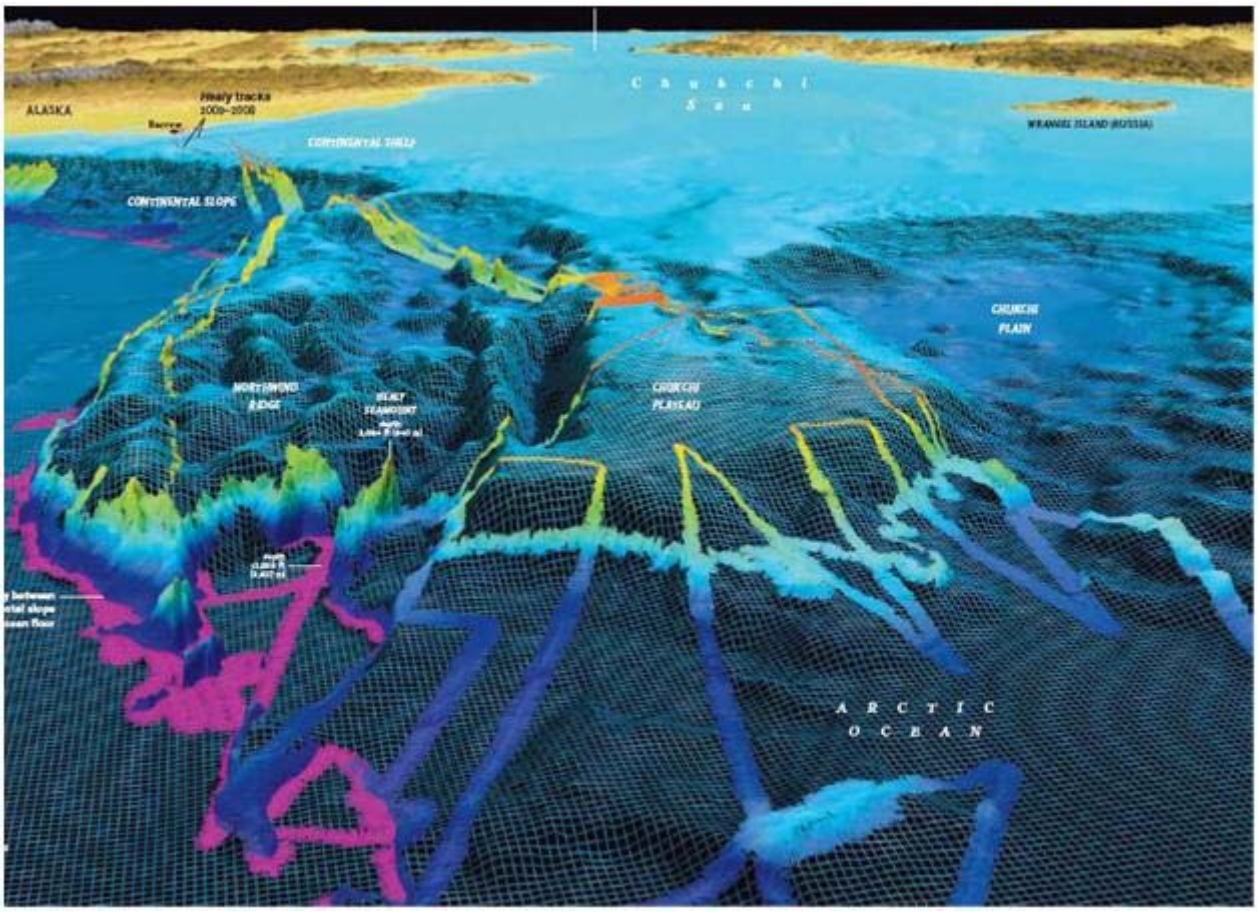
Source: US Department of State

Map 4: Danish Effort in the High North



Source: US Department of State

Map 5: US Extended Continental Shelf Project



Source: Brian Van Pay, "National Maritime Claims in the Arctic" at "Changes in the Arctic Environment and the Law of the Sea" The 33rd COLP Conference Seward, Alaska, May, 2009

Five Arctic states issued the Ilulissat Declaration on 28 May 2008, affirming that each state would remain committed to the legal framework of the law of the sea to resolve any overlapping claims. The agreement by the Arctic states to resolve their disputes through the UNCLOS framework suggests that the overlapping boundary issues will be settled amicably, although it is likely that they will take some time to be finalized.

Article 136 of UNCLOS provides that the 'Area' beyond national jurisdiction and its resources are the common heritage of mankind. No State shall claim or exercise sovereignty or sovereign rights over any part of the Area or its resources. All rights in the resources of the Area are vested in mankind as a whole, on whose behalf the International Seabed Authority, an autonomous international organization that administers mineral resources in the Area, shall act. The Non-Arctic States and international organization can seek interests in the exploration and exploitation of the natural resources only in the seabed beyond the jurisdiction of any Arctic States in this region. However, the general conduct of States in relation to the Area shall be in accordance with the provisions of UNCLOS, the principles embodied in the Charter of the United Nations and other rules of international law in the interests of maintaining peace and security and promoting international cooperation and mutual understanding. It is clear that none of the non-Arctic states challenge the territorial claims in the Arctic and the related claims for jurisdiction rights. It does appear that UNCLOS must be interpreted in the broader perspective of humankind.

Challenge and cooperation in energy development

Political challenge for oil companies that show interest in energy extraction may stem from unresolved boundary disputes. Besides, the opening up of Arctic sea routes once only navigable by icebreakers threaten to complicate delicate relations between countries with competing claims to Arctic territory — particularly as once inaccessible areas become ripe for exploration for oil and natural gas. The United States, Russia and Canada are among the countries attempting to claim jurisdiction over Arctic territory alongside Nordic nations.

Analysts say Japan, South Korea and China are also likely to join a rush to capture oil and gas trapped under the region's ice. The Arctic states are very concerned about these non-Arctic States' position on Arctic status. It is clear that China has an agenda and is looking to use existing regimes to advance its interests at the multilateral and bilateral level. China has recently entered into bilateral discussions with both Norway and Canada. Due to China's fast economic growth and military capacity building, suspicions about China's intentions in the Arctic also arise, driven by what Western analysts call the 'China Threat Theory', though China defends with the 'Peaceful Development Theory'. Although Hu Zhengyue, Chinese Deputy Minister of Foreign Affairs, has said 'China does not have an Arctic strategy', China does appear to have a clear agenda regarding the Arctic. In his speech at Svalbard, Hu acknowledged that the Arctic is mainly a regional issue but said

that it is also an inter-regional issue due to climate change and international shipping. Unsurprisingly, China would like to see the Arctic states recognize the interests of non-Arctic states (Ning, X., 'di qui wei lai de suo yin: wai jiao bu bu zhang zhu li tan 'bei ji yjan jiu zhi lv'" [A microcosm of the world's future—Deputy Minister of Foreign Affairs talks about 'High North Study Tour'], Shijie Bolan, vol. 349, no. 19 (2009), p. 58).

Economic challenges also exist. Finding large Arctic oil and natural gas deposits is difficult and expensive; developing them as commercially viable ventures is even more challenging. Arctic oil and natural gas resource exploration and development are expensive because of the challenges from harsh winter weather that requires that the equipment be specially designed to withstand frigid temperatures, limited transportation access and long supply lines that reduce transportation options and increase transportation costs, physical environment that requires additional site preparation to prevent equipment and structures from skinning, and operating costs that are increased by the ice-pack conditions that extend over much of the Arctic Ocean. In addition, while the Arctic has the potential to be a more important source of global oil and natural gas production sometime in the future, the timing of a significant expansion in Arctic production is difficult to predict. Statoil, a global energy company, announced in April that it had made the most significant discovery off Norway in the past decade at its Skrugard prospect in the western Barents, breathing new life into Norway's hitherto declining oil prospects. But producing oil and gas in Norway's remote "High North" might entail higher costs and possibly greater risk of spills.

In addition to political and economic challenges, technological concerns should not be neglected, as the feasibility and thus the cost of extracting oil and gas in the Arctic will depend heavily on the state of the available technology as well as climatic developments which may produce a more or less hospitable environment in which to operate. Extraction technology has been grappling with extreme-climate marine drilling for decades, but the pace of new advancements will dictate the feasibility of exploitation in coming years.

It is more challenging to forecast the level of offshore hydrocarbon extraction in the future. As noted, operating in the Arctic environment is made more challenging by the presence of ice and the generally severe weather conditions. In order to manage the risk that flows from these conditions, hydrocarbon extraction operations must design safety and protection into their infrastructure and procedures. Moreover, given the more fragile nature of the Arctic environment in comparison to other hydrocarbon producing areas of the world, companies will be expected to operate with increased environmental safeguards in the Arctic. Together, these higher standards will result in increased operating costs for the oil and gas companies. These costs may convince some companies that the potential gains are not worth the risks of investing in the region.

Opportunity for cooperation

The high cost of doing business in the Arctic suggests that only the world's largest oil companies, most likely as partners in joint venture projects, have the financial, technical, and managerial strength to accomplish the costly, long-lead-time projects dictated by Arctic conditions. Incentives to settle outstanding disputes would rise with the increasing potential economic returns posed by exploitation and the resulting polarization within the international system.

While there are disagreements between the Arctic states on maritime boundaries, there are still reasons to believe that these disagreements can be resolved amicably. The prospect for conflicts relating to unresolved boundary disputes seems remote. The existing vehicles for dispute resolution and cooperation in the region, UNCLOS and the Arctic Council, will also help to reduce tensions.

Joint management of resource fields is another option that might come into play as countries involved in a dispute might see more advantage in approaching the disagreement this way rather than losing a claim in an international tribunal. Cooperation between Norway and Iceland regarding the development of the Dreki field could serve as a model for similar arrangements in the future. Another example is the continental shelf dispute concerning an area rich in natural gas between Russia and Norway in the Barents Sea. Both countries dispute the other's interpretation of where their borders extend into the offshore EEZ. While it is possible that there could be a conflict between the two countries over this area, it seems highly unlikely given the potential costs versus the potential benefits.

Geopolitical issues are not exclusively conflicts over interests, although such concerns tend to dominate. They can also reflect cooperative, multilateral initiatives by which a state pursues its interests vis-à-vis others. Such cooperative ventures are often considered desirable and even unavoidable when a state is seeking a result that cannot be achieved unilaterally. At the same time, cooperation frequently establishes a level of governance – in some cases formally, in others less formally – by which mutual understanding can clarify intentions and help to build trust.

Recognizing and respecting each others rights constitutes the legal basis for cooperation between Arctic and non-Arctic states. In accordance with UNCLOS and other relevant international laws, Arctic states have sovereign rights and jurisdiction in their respective areas in the region, while non-Arctic states also enjoy rights of scientific research and navigation. To develop a partnership of cooperation, Arctic and non-Arctic states should, first and foremost, recognize and respect each other's rights under the international law. Examples between Arctic and non-Arctic states are there. On 22 November 2010, the Sovcomflot Group (SCF) and China National Petroleum Corporation (CNPC) signed a strategic long-term cooperation agreement. The parties agreed to develop a long-term partnership in the sphere of seaborne energy

solutions, with the SCF fleet serving the continually growing Chinese imports of hydrocarbons. Taking into account the significant experience gained by Sovcomflot in developing the transportation of hydrocarbons in the Arctic seas, SCF and CNPC agreed upon the format for coordination in utilizing the transportation potential of the Northern Sea Route along Russia's Arctic coast, both for delivering transit shipments of hydrocarbons and for the transportation of oil and gas from Russia's developing Arctic offshore fields to China. A new fleet of tankers designed to operate in ice as well as additional heavy-duty ice breakers will be built to that end. South Korea´s Samsung Industries is looking into filling the technological gap to make it possible to deliver Arctic natural gas across the pacific ocean to East Asia. Russia is building massive duel-bowed oil tankers that are set to come into use as soon as next year. While traveling forward, the ships move as they normally would through open water. But when the vessels move backward, they can act as ice-breakers. Construction is underway on two 70,000-tonne ships and two more 125,000 tonne ships and there are rumors that another five are on order.

Conclusion

The Arctic has recently witnessed a manifold growth in its geostrategic importance due to the huge deposit of oil and natural gas, and the potential contribution of northern sea routes for global shipping. As a result of this, northern regions and seas have become a target area for the growing economic, political and military interests of the Arctic states as well as of major powers outside the region and trans-national companies.

While it is important to look at the Arctic issue from a law of the sea perspective, with the Arctic states resorting to the Commission of Limits of Continental Shelf (CLCS) for advice on the outer limit of continental shelf, and major powers, transnational corporations are seeking chances to develop the region within the framework of a 'common heritage of mankind' beyond national jurisdictions; political, economic and technological concerns also challenge oil companies in further investment in energy development in the Arctic. By the same token, however, joint management of resources is another option that might come into play as countries involved in a dispute might see more advantage in approaching the disagreement this way rather than losing a claim in a zero-sum game. The energy factor, rather than a curse for the Arctic, could serve as an opportunity for regional cooperation in the region.

Nong Hong is a postdoctoral fellow with the China Institute, University of Alberta, and also the Deputy Director, Research Centre for Oceans Law and Policy, National Institute for the South China Sea Studies. She can be contacted at nong@ualberta.ca or hongnong1026@gmail.com